

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>18773-WO-05</b>	<b>FOR FURTHER ACTION</b> <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/IL2005/000385</b>	International filing date (day/month/year) <b>11/04/2005</b>	(Earliest) Priority Date (day/month/year) <b>26/08/2004</b>
Applicant  <b>E.S.T. ECOLOGICAL SYSTEMS LTD.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 1

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2005/000385

### Box No. IV Text of the abstract (Continuation of Item 5 of the first sheet)

The invention is a system and method for neutralizing fluid chemical waste products that result from a chemical production process and are collected from the production line. The invention comprises a pyrolysis/rection chamber (200) into which the fluid chemical waste is pumped (140) through an atomizer (160). The jet of small droplets of liquid waste that is formed by the atomizer (160) effectively contacts the plasma stream created by a plasma torch (220). When the droplets contact the plasma stream the molecules of the waste from which the droplets are composed are dissociated into atoms and/or ions. These atoms and ions move out of the immediate region of the plasma stream and recombine to form a mixture of product gases which exits the chamber. The product gases then enter a post-pyrolysis subsystem (300), which is designed to neutralize and/or collect the components comprising the mixture of product gases.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2005/000385

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 B01J19/08

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A62D B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 644 877 A (BARTON ET AL) 24 February 1987 (1987-02-24) cited in the application abstract; figures column 6, line 45 - line 49 column 7, line 11 - line 19 column 7, line 47 - line 57 -----	1,3,5-8, 15,16, 19,21-26
X	WO 03/066197 A (TBI CO., LTD; KIM, SIN, DO; KIM, JONG, HO; YOO, AE, KWON) 14 August 2003 (2003-08-14) abstract; figures page 11, line 7 - page 12 -----	1,21
A	US 5 484 978 A (HEDBERG ET AL) 16 January 1996 (1996-01-16) abstract; figures column 3, line 10 - line 15 -----	1-26

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☒

Further documents are listed in the continuation of box C.

☒

Patent family members are listed in annex.

**\* Special categories of cited documents:****"A"** document defining the general state of the art which is not considered to be of particular relevance**"E"** earlier document but published on or after the international filing date**"L"** document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)**"O"** document referring to an oral disclosure, use, exhibition or other means**"P"** document published prior to the international filing date but later than the priority date claimed**"T"** later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention**"X"** document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone**"Y"** document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.**"Z"** document member of the same patent family

Date of the actual completion of the international search

21 July 2005

Date of mailing of the international search report

27/07/2005

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## INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 708 409 A (BAINBRIDGE R,CA) 2 January 1973 (1973-01-02) abstract; figures column 4, line 24 - line 35 -----	1-26
A	US 4 909 164 A (SHOHET ET AL) 20 March 1990 (1990-03-20) abstract; figures column 4, line 16 - line 22 -----	1-26
A	US 5 935 293 A (DETERING ET AL) 10 August 1999 (1999-08-10) abstract; figures column 6, line 57 - line 65 column 7, line 37 - line 43 column 8, line 9 - line 14 column 8, line 18 - line 21 -----	1-26
A	US 2004/043721 A1 (IMAFUKU KOSUKE ET AL) 4 March 2004 (2004-03-04) abstract; figures paragraph '0008! paragraph '0012! paragraphs '0059!, '0060! -----	1-26
A	US 6 372 156 B1 (KONG PETER C ET AL) 16 April 2002 (2002-04-16) abstract; figures column 2, line 37 - line 54 -----	1-26

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL2005/000385

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**INTERNATIONAL SEARCH REPORT**

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